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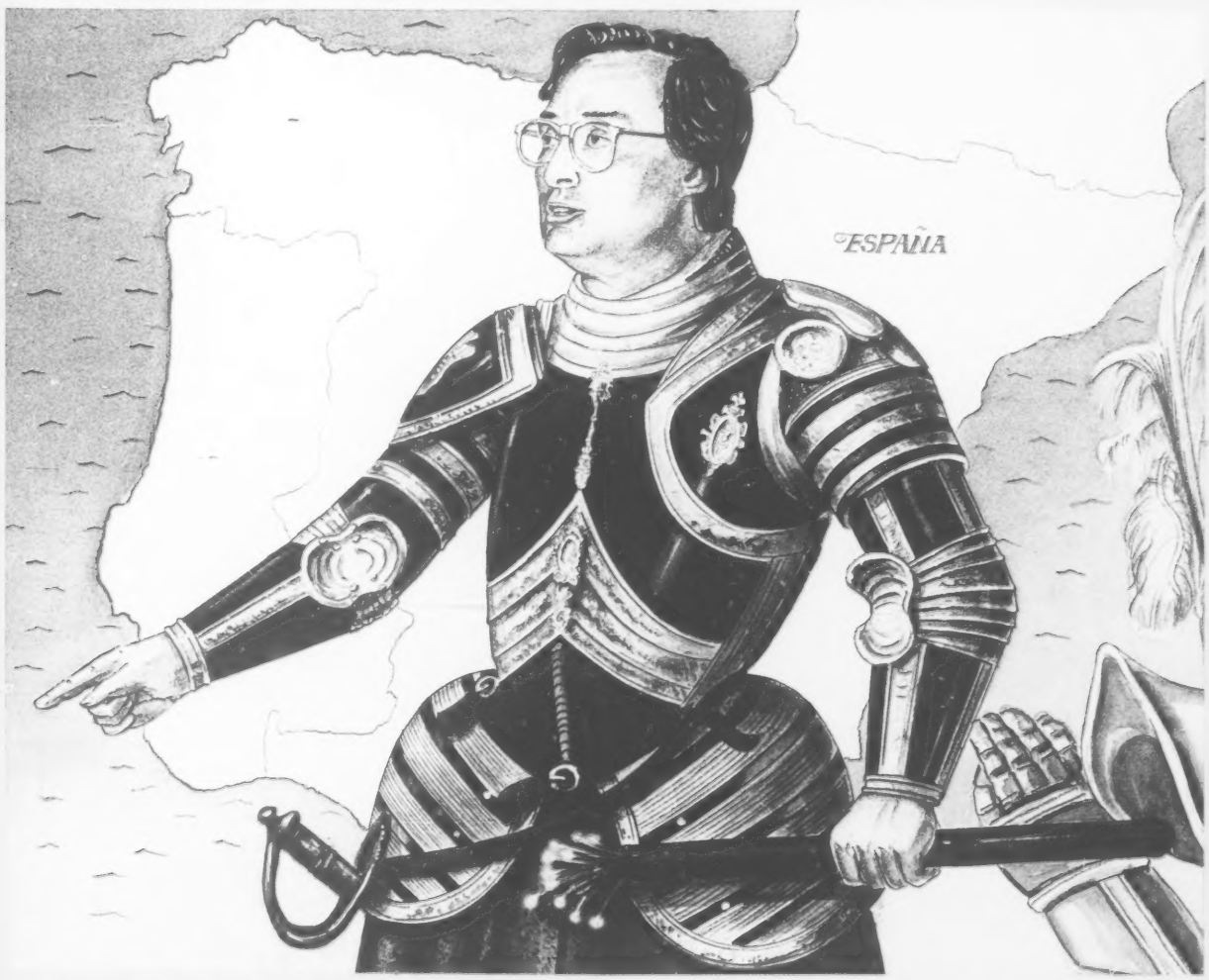

TELEFONICA'S AGGRESSIVE AGENDA

Chairman Luis Solana has big plans for his PTT in the international arena

IBM'S NEW COMPUTER STRESSES CONNECTIVITY

Long-awaited midrange model supports SAA, token ring LAN

SNEDAKER SEES ROSIER FUTURE FOR US SPRINT

IXC ready to put billing system and budget woes aside

MONDAY, JUNE 27, 1988 Volume 214, No. 26

Telephony

INTEGRATING VOICE & DATA COMMUNICATIONS

Luis Solana, chairman of Telefonica, is a latter-day conquistador in a big hurry to conquer international markets before other European PTTs get the chance. Cover design by Michael Sonnenfeld; art by Bruce K. Kerr

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By Peter Purton. Mass market, on-line information services have mushroomed throughout Europe, but most have failed to attract a large consumer following

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integrating networks, without time-consuming tariff filing procedures.

"We're not going to sit and fold our hands because Tariff 12 came out," noted Kenneth Crandall, senior vice president for US Sprint. "I don't think it changes things very much."

Crandall, along with Michael VanZetta, MCI's senior marketing manager, was quick to point out recent successes against AT&T, such as a $108 million contract awarded US Sprint and Illinois Bell by the state of Illinois, and a Merrill Lynch contract won by MCI.

Rumors also circulated that MCI had recently supplanted AT&T at Continental Insurance in New York, and that it had captured the Dun & Bradstreet account against an AT&T Tariff 12 pitch.

The optimism was not convincing to all of the nearly 100 vendors, users, resellers and consultants at the seminar.

"I think you guys are being Pollyannish," said Yankee Group Managing Director Howard Anderson. "Tariff 12 is going to be very appealing to major corporations. To put up a sales pitch that says, 'We do everything better than anyone else,' is probably not going to fly."

One of the attractions of a Tariff 12 offering is AT&T's ability to offer "end-to-end" solutions and to do so with its own equipment, Anderson noted. These capabilities cut down on users' staff requirements, and enable AT&T to take an aggressive pricing approach, he said.

"This is either going to make you respond and lower your costs, or you're going to lose market share," he warned.

The importance to both AT&T and the smaller carriers of securing large accounts for integrating data, voice and video transmissions rang loud throughout the seminar.

VanZetta described the market as one MCI strategically needs to have a foothold in and to win in. "The users that we're talking to are going to help provide the technological leadership we need to bring to the marketplace, as well as the revenues I feel are critical for us going forward," he said.

Observers at the seminar interpreted AT&T's formation of a Systems Integration Division within its Business Markets Group and an alliance it is reportedly forming with Computer Sciences Corp. as moves to strengthen its assault on the custom network market.

AT&T has placed four contracts under Tariff 12, with the Department of Defense, Dupont, Ford, and General Electric. The FCC is currently investigating the legality of all but the DOD contract.

While the four accounts serve as revenue generators, they also potentially play the technology development role described by VanZetta. AT&T's new Bandwidth Management System, for example, was developed as part of GE's Tariff 12 system, it was noted. Similarly, some sources said a Universal Network Management Architecture product in use with a Tariff 12 customer may soon emerge as a general AT&T offering.

On the regulatory side, former FCC Chairman Richard Wiley summed up the competitors' opposition to Tariff 12, noting that they "see it as a means by which [AT&T] can circumvent dominant carrier status." He described the agency's challenge as reconciling that status with AT&T's "competition with the Allnets, the Sprints and the MCIs of the world, in a specific market niche."

AT&T Division Manager of Federal Regulation Stub Estey said Tariff 12 does not afford the dominant carrier an opportunity for anti-competitive pricing, since filings must show that the company will have a positive net revenue from a sale. "As long as our rates for these services cover our costs, which they do, they are not anti-competitively low."

Allnet Deputy Counsel Roy Morris disagreed, contending that AT&T can take a supermarket pricing approach by lowering tags on Tariff 12 sales to below costs while raising prices in other areas.

Morris took issue with what he saw as the potential dizzying effects of Tariff 12 and Tariff 15 on industry pricing, likening AT&T competitors' traditional behavior to a tail following the dog. "But when the dog starts chasing the tail, you get a spiral," he said, apparently alluding to the price discount provisions of Tariff 15.

Concerns were also voiced that the cumbersome process of tariff filings may steer users shopping for custom networks away from AT&T.

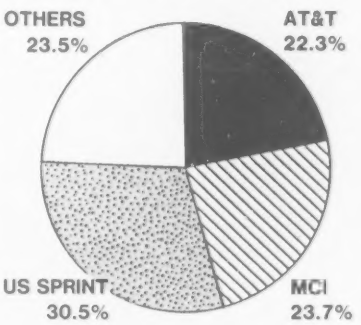
Stan Welland, manager of corporate telecommunications for GE, described the procedure as a disadvantage for AT&T. At the time he was choosing a custom network, he said, MCI and Sprint were not viable alternatives. "If we were to choose today, it could be a different story," he said, being careful to note that "we're happy with what we have."

AT&T's Estey would not attribute any lost accounts to the onus of FCC paperwork, but conceded he has detected some leeriness among potential customers. The federal government, in shopping for vendors for its FTS 2000 system, for example, has told the FCC it would not consider the system to be subject to Tariff 12 filings if it chose AT&T.

Another potential AT&T customer, Estey said, has hired a counsel to determine whether the FCC would subject an AT&T installation to Tariff 12 regulation.

One consensus that emerged from the two-day seminar was that the complex strategies and myriad alliances involved in chasing the custom network market have blurred distinctions in the cast of characters that includes carriers, users as resellers, network systems and network equipment vendors, Bell operating companies and others. T

FO MILES IN PLACE THROUGH 1989, BY COMPANY



Kessler projects FO expansion

Michael Warr
Technical Editor

Fiber optic cable in the U.S. will be extended by 80,000 miles amounting to 1.5 million miles of fiber by the 1990s, according to a report published by Kessler Marketing Intelligence.

The three giants, US Sprint, AT&T and MCI, will own and operate three-fourths of that cable. John Kessler, president of KMI Corp., based in Newport, R.I., said that the "shape and capacity of the network will be a major factor in the growth of the metropolitan bypass and subscriber-loop markets."

Eighteen carriers that deploy fiber optics in long-haul networks are analyzed in the $1050 KMI report entitled, "Long-

continued on page 14

Haul Fiberoptic Communications."

The report's projected FO cable in route miles from 1985 through 1989 shows US Sprint in the lead with about 24,000 miles, followed by MCI with 18,000, and AT&T with 17,000 miles.

Kessler says that the carriers are competing over access to national and international highways and to points of presence near major industrial and commercial Fortune 1000 users. They are also maneuvering over mergers, acquisitions and divestitures.

The report makes a strategic assessment of the carriers and includes route maps, present and planned POPs, available services, types of FO systems installed, and a list of the suppliers of FO equipment and cable.

For example, Kessler says that the Williams Telecommunications Group, the fourth largest deployer of FO cable, is departing from the ranks of the regionals and joining that of the national networks. Kessler anticipates acquisitions by Williams Telecommunications, which wants to "position itself as the primary alternative to AT&T for private line users."

Based on DS3 capacity over a 100-mile route, the report concludes that FO cable is the most cost efficient. For instance, nine DS3 lines over copper cost $7 million, while via satellite transmission they cost nearly $15 million. Microwave transmission is just about even with fiber optics at slightly under $5 million. Once capacity moves beyond 10 DS3 lines, however, microwave transmission also becomes more expensive than FO transmission facilities. T

Union leaders speak out for telco laws

Charles Mason
Washington Editor

The leaders of the nation's two major unions representing telecommunications workers went to Capitol Hill June 16 seeking legislation aimed at helping laid-off telco employees find work.

"More than 53,000 jobs in the regional holding companies have been eliminated since divestiture. In AT&T, 87,000 jobs have been lost," Communications Workers of America President Morton Bahr told the House telecommunications subcommittee. "There are actions Congress should still take to reassert your role in the development of a national telecommunications policy."

Both Bahr and John Barry, president of the International Brotherhood of Electrical Workers, voiced support for legislation that would require AT&T, the RHCs' operating companies and other RHC subsidiaries to give preferential hiring rights to workers employed in the Bell System at the time of divestiture but who have since been laid off. The preferential system would give those workers first crack at jobs before others could be considered.

There was no testimony offered by industry representatives.

The legislation, which probably will not be voted on this year, has the support of several lawmakers and could be incorporated in any congressional action on the Modified Final Judgment. T

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Nynex bites into videotex deal

Elizabeth Schultz
Associate Editor

While visitors to the Big Apple's Jacob Javits Convention Center can sink their teeth into their show and the city with the help of a Nynex-developed video information system, Nynex has taken a big bite into videotex with its first major application.

This Bell regional holding company's videotex application has found its way into the Javits facility in six freestanding, interactive kiosks scattered about the convention floor. The kiosks house terminals equipped with keypads to allow visitors to access information about local events, restaurants and transportation schedules. Complete with printers, users get printed copies of directions and coupons displayed on the screen.

This videotex application, explained Jerry Campagno, vice president and general manager of Nynex Computer Services Co., uses IBM PCs and Sony monitors interfaced with a broadband Ethernet local area network that supports data

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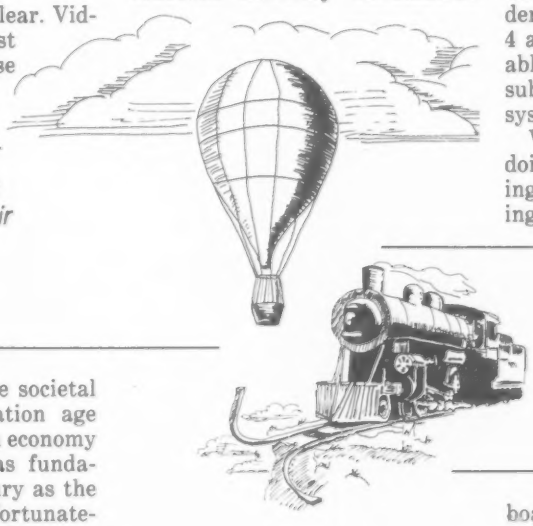
Consumer videotex: the perilous path

ELLIS BOOKER, Features Editor

Discussion about consumer videotex and its prospects for success in this country can conjure conflicting images.

For some, videotex is like a wonderful hot air balloon, finally about to fly free and rise into the clouds. For others, videotex is like an out-of-control train hurtling toward a canyon pass—and the bridge is out.

The stakes are more clear. Videotex could generate vast sums of money for those who deploy mass market, on-line information services. And the societal effect of those information age services on the American economy and culture might be as fundamental in the 21st century as the car was to the 20th. Unfortunately, the operative words here are "could" and "might."



For some, videotex is like a wonderful hot air balloon, finally about to fly free and rise into the clouds.

For others, videotex is like an out-of-control train hurtling toward a canyon pass—and the bridge is out.

Proponents of consumer videotex point out that elsewhere in the world millions of people use on-line information services daily. Gingerly referring to the past failures of videotex in this country, they say the industry has matured and learned valuable lessons about marketing and distribution. And they note that once skeptical lawmakers and regulators have begun to see the need for videotex if the U.S. wishes to compete in the 21st century.

The naysayers say they've heard it all before. They recall past videotex systems (notably those started and quickly folded by Knight-Ridder and Times Mirror) failed to generate consumer interest or demand. They add that the U.S. environment is unique (read *not like France*), not only because there is no single agency dictating the direction in information services, but because America already has pockets of sophisticated on-line information users who probably will not find videotex very enticing.

Current Numbers

According to the seven-year-old Videotex Industry Association Inc., there are 700,00 home subscribers accessing 40 fee-based consumer videotex systems. The VIA also believes there may be as many as 500,000 users of private, usually non-fee bulletin board systems. Accounting for cross-over between these two groups, the VIA estimates there are 960,000 subscribers or households accessing on-line information systems.

In her address to the membership June 14 at a recent meeting in Washington, VIA Chairman Hilary B. Thomas said, "Our vision for videotex by the year 2000 is that 97% of the North American population will have access and 50% will be using videotex on a casuai basis."

This is a heady agenda, given the VIA's own figures showing only 1.1% of U.S. households using some form of videotex.

And buried inside this last figure is one of the more discouraging facts about videotex as it now exists, observes Gary Arlen, president of Arlen Communications Inc., a Washington-based market research firm specializing in videotex.

"Twenty-five percent of the people with PCs have modems," Arlen says, noting that this modem-owning population (between 4 and 8 million) is still considerably smaller than the combined subscriber base for all videotex systems.

What are those other modems doing? Arlen thinks many are being used for business telecommuting or access into private bulletin boards. The remainder of PC owners, thinks Arlen, are either uninterested in videotex or don't know these services exist.

To get videotex moving, Arlen continues, "evangelizing is needed." And he thinks this is a role that the nine major North American telephone companies—the seven Bell regional holding companies, GTE and Bell Canada—could play very well.

"They may not be great marketers, but they do have a lot of ways into the household, with bill inserts and advertising," he says.

Which Button?

Before the RHCs or anyone else launches a videotex marketing plan, they will have to identify the market. Most analysts agree that in order to be viable, a videotex service must attract a wide audience, an audience larger than

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the installed base of curious personal computer users and hackers. Moreover, novice users will need a simple way to enter the on-line network and equally simple ways to gather information once they are there. Finally, the service must be priced right and provide services—electronic mail, home banking and shopping, news and so on—that subscribers will use again and again, not explore once and abandon.

At first blush it would seem that the terminal, the device that makes the connection between the videotex services and the paying customers possible, is the easiest component of the problem. The French, for example, created the Minitel, a terminal with the non-technical user in mind. The Minitel, now deployed in some 3.6 million households in France, features dedicated function keys and a keyboard with an alphabetic, not typewriter QWERTY, keyboard layout.

"I love demonstrating it for children—it's so easy to use," says Paul White, Public Affairs Counsel for U.S. Videotel Inc. The year-and-a-half-old, Houston-based company has exclusive rights to the Minitel technology in the U.S.

Videotel, which markets a modified version of the Minitel terminal manufactured by Alcatel, says it plans to have residential videotex service in three major markets by the end of this year. And White confirms that the company is in "serious" negotiations with at least four of the RHCs. He also hints that a joint marketing agreement with one of these will break before the end of the year.

But others doubt that the French approach is right for this country. "The Minitel experience cannot be generalized here, especially given the modem penetration here," says Francis McInerney, an analyst with Northern Business Information. McInerney echos the criticism of some RHC executives who disparage the Minitel as an old technology.

"To adopt that model is to have failed in the effort to be the world leader in technology," BellSouth Vice President C. Sidney Boren said recently.

In the same breath, Boren stated BellSouth's desire to engage in the design of terminal equipment, a line of business that the RHCs are still restricted from, and to make a "cheap but upgradeable" terminal.

Meanwhile, BellSouth's counterpart to the west, U S West, is at least considering the Minitel-type terminal as one way to go. In late May, the company inked an agreement with Minitel USA, a France Telecom subsidiary, to explore the Minitel videotex concept and look for a test city in this country.

U S West also said it would work to assure compatibility between the French system and terminals and its own gateway.

U.S. VIDEOTEX TRENDS

	1980	'81	'82	'83	'84	'85	'86	'87
Systems (paid)	4	4	11	24	25	33	35	40
Customers	8.2K	43K	91K	176K	382K	568K	800K	1200K

Figures courtesy of Arlen Communications Inc.

Assuming that the RHCs decide the videotex terminal question, what on-line services will subscribers want?

As Arlen puts it: "What hook gets non-computer people in?" Arlen admits that home banking, a service he confesses is a personal favorite, has done abysmally where it has been tried. "Bill paying is a right service ... it just hasn't worked yet," he says. Another natural service, according to Arlen, is what he calls "telegambling," although he acknowledges that such an application opens a legal can of worms.

For analyst McInerney, a serious drawback of videotex—as it is implemented on the Minitel, for example—is that it is "too slow for games." Unfortunately, the one sort of game that Minitel in France does seem to provide in abundance—interactive, adult "chat" lines and electronic mail—will likely draw the same kind of public outrage that today hounds the 976 services industry.

Arlen, too, thinks the U.S. videotex experience will track similarly to the French, where adult services contribute substantially to Minitel's revenues. But Arlen believes that while this application is perhaps necessary, it is not the ultimate future of videotex.

"Think about videocassettes in 1979," he says. "Big studios didn't want to release films for fear of the impact on cable and movie theaters. So the first audience was for porno movies." According to Arlen, once the major studios saw the profits that could be made in the video market, they began to release feature films, thereby making movies on videocassette respectable.

Gateway, This Way

The geography of the videotex industry changed March 7, when U.S. District Judge Harold Greene permitted the RHCs into information services. Greene's order, while stopping short of allowing the companies into providing information content, explicitly supports the notion of gateways, whereby the information services of others could be accessed through Bell operating company public networks.

RHC officials still squirm under the information content restriction. But analysts predict the RHCs will work with what they have. "We believe their strategy is to maximize the usage of their networks," says Gerald L. Mayfield, president of DMW Group. For this reason, Mayfield adds, they will pursue the gateway approach.

Mayfield also repeats a theme brought up by many of the analysts:

"In the end," he says, "this will be a marketing game. The RHCs may not realize how much they need a marketing partner. [Videotex] will require a significant departure from traditional telephone marketing." T